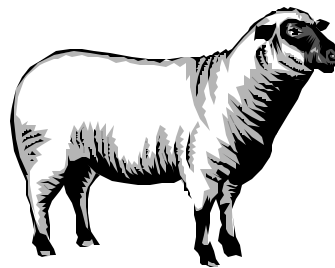


# **SHEEP INDUSTRY**

## **BUSINESS RETENTION AND ENHANCEMENT STRATEGIES PROGRAM**

### **Summary Report**

**December 1998**



#### **Sponsors**

Minnesota Lamb and Wool Producers Association  
University of Minnesota  
Central Livestock Association  
Pipestone Veterinary Clinic  
Prairie Lamb Cooperative  
Minnesota Department of Agriculture

## Introduction

The Minnesota sheep industry is in decline (see Figure 1). From a record of 1,015,000 lambs in 1942, the lamb crop has declined to 160,000 in 1996. The number of farms with sheep fell to 3,300 in 1996, less than a quarter of the farms with sheep in 1968. The lamb crop fell through the 1970s, and then remained fairly stable through the 1980s. Stock sheep numbers and lamb prices nationally tend to follow cycles of 9 to 10 years. Fluctuations in the Minnesota lamb crop are consistent with the national pattern, with two cyclical downturns bottoming out in 1979 and 1987 and a third downturn evident through 1995-96. A turnaround is not yet evident in inventories of breeding sheep and lambs, which have continued to fall through January 1, 1998.

The Minnesota Sheep Industry Business Retention and Enhancement Program was initiated through the efforts of current Minnesota Lamb and Wool Producers Association (MLWPA) president Roger Karstens. It was intended to help build a coalition within the entire industry in Minnesota and provide a way of learning more about what the state association could do for sheep producers throughout the state. A committee was formed in the spring of 1997 to further investigate the potential of utilizing the University of Minnesota's Business Retention and Expansion Strategies Program, which had helped a number of other industries in the past to accomplish this goal. In April of 1997 the committee reported back to the MLWPA Board of Directors, who in turn moved to proceed with the project. The board committed funds to cover part of the project's cost, with the expectation that other private and/or public funds would be obtained to cover the remainder.

The board appointed Dale Carter as project coordinator, with a leadership team consisting of:

Dr. Bill Head, University of Minnesota West Central Experiment Station,  
Mr. Mike Caskey, Pipestone Lamb and Wool Program,  
Mr. Bret Oelke, producer,  
Mr. Robert Padula, producer,

and MLWPA regional directors:

Mr. Joel Rehm, Northwestern Region,  
Ms. Janet McNally, Northeastern Region,  
Mr. Jeff Tebben, West Central Region,  
Mr. Kelley O'Neill, Southeastern Region, and  
Mr. Steve Schreier, Southwestern Region

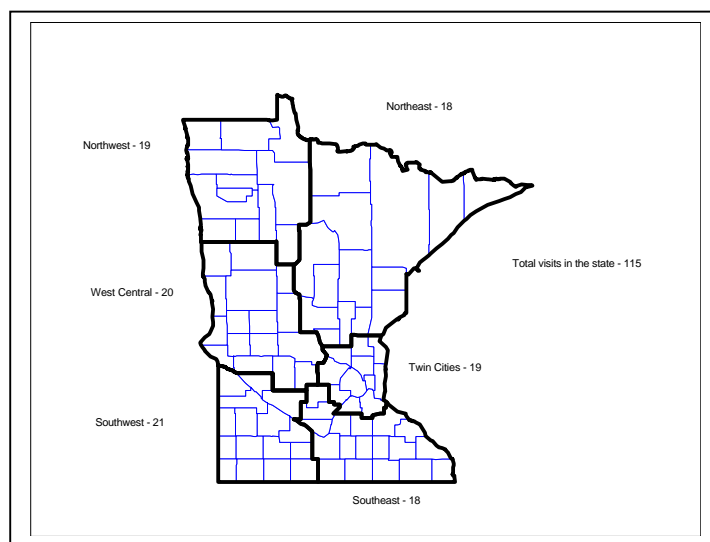
A key part of the project was for teams of volunteers to visit randomly selected sheep operations, in order to gain a better understanding of:

- barriers to retaining and expanding Minnesota's sheep industry,
  - educational programs and research which would help sheep producers earn higher incomes, and
  - ways to improve the image of the sheep industry,
- with the ultimate goal of developing action plans to strengthen the state's sheep industry.

The leadership team developed an interview questionnaire in the fall of 1997. Regional visitation teams of two persons each were identified to conduct the interviews.

### **Description of Sample Visited**

Producers who had marketed over 400 pounds of wool in 1995, based on the 1995 Wool Incentive Program List, were considered for visits. In order to have the entire state represented, the list was divided into the five MLWPA directorship regions plus the metro area (see Figure 2). The goal was to interview roughly twenty producers in each region who were raising sheep in 1997. Producers' names were drawn randomly from each region's list until a sufficient number of interviews were completed in the region. A total of 190 producers were contacted about interviews, and 115 producers were interviewed, for an overall response rate of 60 percent.



**Figure 1. Number of BR&E Visits by Minnesota Lamb and Wool Producers Association Region**

The most common reason for non-response (30 out of a total of 76) was that the producer was no longer raising sheep. One of the questionnaires was incomplete, so 114 were included in the tabulations in this report.

The state and regional task forces then reviewed the data and began to identify possible action steps. In addition, the leadership team traveled to each region to meet with the regional interview teams to obtain further insight from the results and ideas for action plans. The statewide task force reviewed the survey results and recommendations and selected the projects it wishes to pursue. This report describes these priority projects.

## Profile of Producers Visited

### Type of Operation

The producers were asked to indicate which one or more of several categories described their sheep operations. Three-quarters of the producers considered themselves to be producing market lambs, with 41 percent producing feeder lambs (Table 1). One-third produce breeding stock. Ten percent run feedlot operations.

The market lamb or feeder lamb category covers all but seven of the operations. Four reported that they produced only breeding stock, and three considered themselves only feedlots or "other". Just under half engaged in more than one sheep enterprise, based on the categories listed.

**Table 1. Types of Sheep Enterprises**

<i>Type of Enterprise</i>	<i>Farms</i>	<i>Percentage</i>
<b>Market lamb producer</b>	85	75%
<b>Feeder lamb producer</b>	47	41%
<b>Breeding stock producer</b>	38	33%
<b>Feedlot operation</b>	11	10%
<b>Other</b>	5	4%
<b>Either feeder lamb or market lamb producer</b>	107	94%
<b>Only breeding stock</b>	4	4%
<b>Only feedlot or other</b>	3	3%
<b>Total</b>	114	100%
<b>More than one enterprise</b>	53	46%

## Size of Operation

The measures of operation size reflect a Minnesota sheep industry that is diverse, ranging from small, hobby farms to full-time, commercial operations.

- Most of the operations lambled 100 or fewer ewes in 1997 (Table 2).
- Four operations lambled more than 350 ewes.
- The average (mean) number of ewes per farm was 112, with a median of 66.
- The statistics on raised lambs marketed shows a similar pattern - a majority marketed less than 100, while eight operations marketed more than 350 lambs.
- In addition, 13 producers reported marketing lambs that were purchased.
- Forty-one of the producers indicated that they would be expanding their sheep enterprise within the next five years.
- Of these 41 expansion-minded producers, 39 were either producing market or feeder lambs while two were other types of operations. The following tables show how the 39 expansion-minded market/feeder lamb producers compare to the entire group.

**Table 2. Breeding Ewes Lambled in 1997**

<i>Number of Ewes</i>	<i>All Farms</i>	<i>Plan to Expand<sup>a</sup></i>	<i>Over 25 Percent of Net Income from Sheep<sup>a</sup></i>
<b>1 -- 50</b>	38	15	2
<b>51 -- 100</b>	39	6	4
<b>101 -- 150</b>	12	6	2
<b>151 -- 200</b>	6	3	1
<b>201 -- 350</b>	11	7	6
<b>351 -- 1,000</b>	4	2	2
<b>Total</b>	110	39	17

<sup>a</sup>The "Plan to Expand" and "Over 25 Percent of Net Income from Sheep" groups include only those producing either market or feeder lambs, not those with only feedlots or breeding stock operations.

The middle column of Table 2 shows that the expanders were more likely to be in the smallest ewe flock size group (1 to 50) or to have 101 or more ewes. Relatively fewer of the expanders were in the 51 to 100 ewe size range. The average ewe flock size was slightly larger for the expander group, at 131 ewes, with a median of 120. They planned to add an average of 110 ewes, which would bring them to an average of 241.

Fifteen producers had between 1 and 50 ewes and planned to expand. They had an average of 32 ewes, and were looking to add an average of 73, which would put them at an average size of 105 ewes.

The right column of Table 2 shows the flock size breakdown for the 17 market or feeder lamb producers who said they had received 26 percent or more of their family net incomes in 1997 from the sheep enterprise. The most common size range for these producers was 201 to 350 ewes. Those reporting 51 percent or more of their income from sheep averaged 313 ewes, while those in the 26 to 50 percent range averaged 164 ewes.

## Reasons for Raising Sheep

Most producers considered the most important reason for raising sheep to be the income they provide (Table 3). Sheep are viewed a bit more strongly as a supplemental income source than as the main source of income. The sheep enterprise provided 25 percent or less of family net income on 78 percent of the farms in 1997 (Table 4). There were eight farms where sheep provided over half of the family's income. Fifteen market and feeder lamb producers had flocks of at least 200 ewes. Of these, five received between 51 and 75 percent of their family net income from the sheep enterprise.

**Table 3. Importance of Various Suggested Reasons for Raising Sheep<sup>b</sup>**

	<i>Number Responding</i>	<i>% Rating 4 or 5</i>
<b>Supplemental Income</b>	104	63%
<b>Main Income Source</b>	100	52%
<b>Forage Consumption</b>	99	36%
<b>Youth Project</b>	96	23%
<b>Recreation/Hobby</b>	96	21%

<sup>b</sup>Scale: 1=least important, 5=most important)

**Table 4. Percentage of Family Net Income that Came from the Sheep Enterprise in 1997**

	<i>All Producers</i>	<i>Producers with 200+ Ewes<sup>a</sup></i>
<b>0-10%</b>	53	1
<b>11-25%</b>	37	5
<b>26-50%</b>	14	4
<b>51-75%</b>	7	5
<b>76-100%</b>	1	0
<b>Did not respond</b>	<u>2</u>	<u>0</u>
<b>Total farms reporting</b>	114	15

<sup>a</sup>The 200+ column includes producers who reported producing market or feeder lambs only, not specialized feedlots or breeding stock producers.

## Strategy: Improve Profits with Better Management and Production Practices

### Overview

It is frequently pointed out that in any business, a useful way to view profits is as a simple formula:

$$\text{profits} = (\text{price per unit} - \text{cost per unit}) \times \text{volume}$$

Strategies to improve profits can focus on any or all three of these considerations - price, cost, and volume. This strategy focuses on the cost side. Anything Minnesota sheep producers can do to reduce costs of production and improve productivity will improve their ability to compete with other sheep producing regions and with other meat industries.

Improved profits will tend to stimulate new investment and growth in market share, in turn supporting industry infrastructure from which all producers can benefit.

Almost half (46 percent) of the producers responded that they were not satisfied with the overall efficiency of their sheep enterprises. Lambing percentage and lamb survivability came out as the area in greatest need of improvement. Producers planning to expand were more likely to respond that their operations needed improvement, although the ordering of specific areas was the same as for the overall group.

Most producers (89 percent) indicated that they keep manual records. Nineteen percent keep computerized flock production records. Only one producer is using the National Sheep Improvement Program (NSIP) record-keeping program. Birth type (81 percent) and lamb survivability (68 percent) are the performance parameters that producers keep with the most consistency, with birth type being utilized 65 percent of the time when replacements are being selected.

**Table 5. Production Records Methods Used**

	<i>Farms</i>
Manual (paper and pencil)	101
Computer	22
National Sheep Improvement Program	1
Other	4

The areas in which producers most frequently expressed the need for immediate assistance were in the areas of lamb and wool marketing, and flock health, with over 20 percent wanting assistance within six months (Table 6). Feedlot permits, flock genetic management, nutrition, and feeding systems were other areas where assistance was desired within one to two years. The producers planning to expand were more likely to desire assistance of every type. The expanders were especially likely to cite feeding systems, handling facilities, flock genetic management, and business planning as areas of need, along with lamb and wool marketing opportunities.

**Table 6. Information and Service Needs Expressed by Producers**

	<i>Within 6 Months</i>		<i>In 1 - 2 Years</i>	
	<i>All producers</i>	<i>Expanders</i>	<i>All producers</i>	<i>Expanders</i>
<b>Lamb Market Opportunities</b>	26%	26%	30%	46%
<b>Flock Health System</b>	24%	33%	22%	28%
<b>Wool Market Opportunities</b>	22%	31%	25%	36%
<b>Animal Nutrition Management</b>	18%	28%	23%	28%
<b>Pasture</b>	17%	21%	18%	21%
<b>Raising Replacements</b>	16%	26%	14%	26%
<b>Handling Facilities</b>	14%	26%	16%	31%
<b>Production Records Systems</b>	14%	26%	19%	28%
<b>Financial Records Systems</b>	13%	23%	14%	23%
<b>Flock Genetic Management</b>	13%	28%	24%	28%
<b>Inventory and Purchase of Inputs</b>	11%	18%	7%	13%
<b>Balancing Work and Family</b>	11%	21%	9%	10%
<b>Business Planning</b>	10%	23%	15%	28%
<b>Feeding System</b>	8%	8%	22%	44%
<b>Labor Management</b>	4%	8%	9%	18%
<b>Livestock, Feedlot Permits</b>	4%	5%	25%	36%
<b>Manure Management System</b>	4%	8%	19%	31%
<b>Harvested Feeding System</b>	3%	8%	10%	18%

## ***Project 1. Develop a Record Keeping System***

Increased use of computerized record keeping on a national basis has been utilized by many other livestock industries to improve productivity and increase uniformity of product, both of which have improved consumer acceptability of their products. Increased use of computerized flock record keeping will give sheep producers the ability to select replacements based on sound selection criteria. This, in turn, will give producers greater faith that they are making genetic improvements. A computerized record keeping system will also give a producer a better understanding of the costs associated with his or her operation and a point for discussion with other producers on how to make the operation more profitable.

As part of this initiative, the project team will explore the development and promotion of a record keeping system that addresses both the financial and production components of a sheep operation. The team will consider data from successful sheep operations in an effort to provide baseline data on operations of different types and sizes. The team will also work with the project team addressing business planning since the computerized record keeping system will help producers in developing business plans and accessing capital.

The Business Retention and Enhancement Task Force members who have agreed to coordinate this effort include: Bill Head, BR&E Leadership Team, Professor and Sheep Specialist, University of Minnesota (ph 320-589-1711); Bob Padula, BR&E Leadership Team, Extension Educator and producer (ph 320-269-6521); Joel Rehm, BR&E Northwest Regional Task Force Leader and producer (ph 218-732-4128); and Lila Schmitt, BR&E Southwest Regional Task Force Leader and producer (ph 507-532-7564). Please contact one of these team members if you would like to help implement this project or want more information.

## **Strategy: Improve the Carcass Quality and Consistency of Lambs and Wool Marketed, and Maintain a Functioning Market System**

### ***Overview***

The functionings of markets and price discovery have been the subjects of significant scrutiny during the 1990s in all of the livestock industries. In 1991, Congress mandated that the USDA Packers and Stockyards Administration study concentration in the meatpacking industry. That work has resulted in a series of reports with suggestions and alternatives for improving the way markets function and price discovery takes place. Some of these suggestions deal with pricing and grading systems while others involve voluntary versus mandatory price reporting.<sup>1</sup> Pricing and grading systems provide incentives to producers to improve carcass quality and consistency, so are a logical area to consider if improvements in those attributes are desired by sheep industry leaders.

### ***Research Results Related to Strategy***

The genetic makeup of the Minnesota sheep flock appears to be quite diverse--producers reported utilizing 40 different breeds or crossbreed mixes in the ewe flock, and 27 different breeds or crossbreeds in their rams. White face wool breeds were the most commonly reported category for ewes, with 48 percent of producers reporting them. Nearly as many producers (46 percent) reported having ewes of a terminal sire breed. For the rams, terminal sire breeds were the most common with 72 percent of the producers reporting them. Producers were able to list more than one breed, so there were more responses (222 for ewes and 205 for rams) than farms (114). Most of the producers reporting raise their own replacements. Only twelve purchased them.

---

<sup>1</sup> One publication that contains suggestions for improving livestock markets is [Price Discovery in Concentrated Livestock Markets: Issues, Answers, Future Directions](#), edited by Wayne Purcell, Research Institute on Livestock Pricing, Virginia Polytechnic University, Blacksburg, VA, February 1997.

White face crossbreeds of various types make up 25 percent of the ewe flock, with most of those ewes being western white face. The white face wool breeds also make up over 20 percent of the ewe flock. Less than ten percent of the producers reported white face crossbreeds, so flock size per farm must have tended to be larger than for the white face wool breeds. For the rams, the large terminal sire breeds were most common at 44 percent of the flock, with the white face wool breeds also making up a large share at 33 percent.

The lambing season is confined mainly to the months of January through May, with only ten percent or less lambing in other months. As discussed earlier, lambing percentages and survivability are key concerns.

**Table 7. Seasonal Lambing Patterns**

<i>What month(s) do you lamb? (circle all that apply)</i>	<i>Farms</i>	<i>Percentage</i>
<b>January</b>	34	30%
<b>February</b>	70	61%
<b>March</b>	71	62%
<b>April</b>	59	52%
<b>May</b>	30	26%
<b>June</b>	7	6%
<b>July</b>	2	2%
<b>August</b>	2	2%
<b>September</b>	9	8%
<b>October</b>	11	10%
<b>November</b>	4	4%
<b>December</b>	7	6%

***Project 2. Develop a set of quality standards and educate producers about the need for more consistent quality in the Minnesota lamb and wool industry.***

The genetic makeup of the Minnesota sheep flock is very diverse—producers surveyed reported utilizing 40 different breeds or crossbreed mixes in the ewe flock and 27 different breeds or crossbreeds in their rams.

In other livestock industries, efforts have been made to standardize genetics in order to provide a more consistent flow of quality carcasses through the slaughter plant. Similar efforts could be made in the lamb and wool industry to increase uniformity.

The project team will work to develop a set of selection standards and educational programs to help increase the quality and consistency of lamb and wool produced in the state. As part of this initiative, the team may consider one or more of the following:

1. jointly work with industry co-partners to develop a set of lamb carcass quality criteria and distribute this to Minnesota producers;
2. develop and distribute educational materials on the producer's responsibility to provide high quality lamb and wool and how Minnesota producers might meet this responsibility;
3. work with processors to develop an educational program on lamb carcass quality that will provide producers with information on the quality of their lamb carcasses; and
4. learn from the experience of wool producers who are already developing quality guidelines.

The BR&E Task Force members who have agreed to coordinate this effort include: Dale Carter, BR&E Leadership Team, Extension Educator, and producer (ph 320-634-5735); John Essame, President of Prairie Land Cooperative and producer (ph 507-925-4415); Bill Head, BR&E Leadership Team, and Professor and Sheep Specialist, University of Minnesota (ph 320-589-1711); Bob Padula, BR&E Leadership Team, Extension Educator, and producer (ph 320-269-6521); Doug Kilen, NW Regional Task Force Leader and Central Livestock Association (ph 218-681-2127); Steve Schreier, SW Regional Task Force Leader and lamb feeder (ph 507-763-3754); and Kelley O'Neill, SE Regional Task Force Leader and producer (ph 507-864-7848). Please contact one of these team members if you would like to help implement this project or want more information.

## **Strategy: Initiate a Business Development Approach to Enhancing the Sheep Industry**

### **Overview**

Twenty four percent of the producers identified development of a business plan as an important or very important challenge when looking at expansion. These expanders also indicated that they would need business planning (28 percent) and financial record keeping (23 percent) systems help within the next 1 to 2 years (Table 6). Forty-five percent of the producers indicated that profitability of their sheep enterprise was very important to them. Most producers are keeping manual financial records (80 percent); 23 percent of the producers interviewed reported using computerized accounting or a farm business management program. When asked what it cost to produce a pound a lamb in 1997, only 29 percent of the producers currently have confidence in the accuracy of this cost figure.

### ***Project 3. Create a statewide Business Plan Development Team to promote and distribute information on business planning.***

Many Minnesota lamb and wool producers, particularly those planning to expand, see a need for information on and assistance in improving the business end of their operations. Twenty-four percent of producers identified development of a business plan as an important or very important challenge when looking at expansion of their operation. Those planning to expand also indicated they would need business planning and financial record keeping assistance or information within the next one to two years.

As part of this initiative, the project team plans to bring together a team to facilitate the use of business planning in Minnesota's sheep industry. Specific tasks this team may consider include:

1. reviewing and revising existing publications on planning, financing, and operating a commercial lamb and wool operation;
2. exploring and reporting on financing sources available to lamb and wool producers;
3. exploring the possibility of enhancing FINPACK's capability to generate sheep enterprise business plans;
4. reviewing and drawing from work of other states on business planning in the sheep industry; and
5. developing informational documents on business planning addressing topics not satisfactorily addressed in existing materials.

The following BR&E Task Force members have agreed to coordinate this effort: Mike Caskey, BR&E Leadership Team, lamb and wool instructor and producer (ph 507-347-3229); Bret Oelke, BR&E Leadership Team, Extension Educator, and producer (ph 218-685-4820); Dave Resch, Twin Cities Regional Task Force Leader, Extension Educator, and producer (ph 612-492-2370); Dale Carter, BR&E Leadership Team, Extension Educator, and producer (ph 320-634-5735); and Steve Church, Central Livestock Association (ph 507-789-6564). Please contact one of these members if you would like to help implement this project or want more information.

## **Strategy: Improve Mechanisms for Different Segments of the Sheep Industry to Be Involved and Work Together for Mutual Benefit**

### **Overview**

The Minnesota sheep industry is a diverse group of hobbyists, part-time enterprises, and full-time commercial operations, as indicated in the section, "Description of Sample Visited." In terms of sheer numbers of producers, the hobbyists and part-timers represent the largest industry segment. If their needs and interests are ignored, the industry leadership will lose a significant base of support. On the other hand, there is a nucleus of commercial producers. The commercial producers generate volumes that support markets and input suppliers. Commercial producers are also more likely to have the resources and incentive to put into place innovations that other producers can also apply.



## ***Project 4. Make the Minnesota Lamb and Wool Producers Association (MLWPA) more focused on supporting the expansion of the lamb and wool industry in the state***

The MLWPA membership consists of a diverse group of hobbyists, part-time operators, and commercial producers. (Commercial producers are defined as those producers whose volume is large enough to derive a major/significant share of their income from sheep.)

All producers contribute to industry viability but commercial producers generate volume that supports maintenance of markets and input from suppliers. Commercial producers are also more likely to have the resources and incentive to put into place innovations that can benefit the entire industry.

The Task Force would like the MLWPA to focus more of its efforts on supporting commercial producers since they will be critical to maintaining the industry in the state. The BR&E Task Force recommends that the MLWPA board address this issue since its leadership will be required to make these types of changes.

The Task Force also believes MLWPA efforts to focus on strengthening the commercial lamb and wool industry in the state will benefit all producers. Smaller operations and hobbyists can benefit from the business and technology adoption experiences of larger scale commercial operations and from the expected maintenance of input providers, processors and markets for their lambs and wool that will result from a healthier commercial industry.

The Task Force also sees an important role for the MLWPA's board in following and affecting local, state, and national policy that impacts commercial lamb and wool producers and in developing strong leadership throughout the state's sheep industry.

These BR&E Task Force members have agreed to coordinate this effort: Joel Hasslen, producer (ph 320-398-7272); Bob Koehler, producer, BR&E Consultant and Livestock Systems Extension Educator, Southwest Experiment Station (ph 507-752-7372); and George Mead, Twin Cities Regional Task Force Leader and producer (ph 612-682-4626).

Please contact one of these team members if you would like to help implement this project or want more information.

## **Other Projects Considered**

The BR&E Task Force considered more than 20 possible projects when setting its priorities. The Task Force adopted the four included in this report. Other projects were nominated but not selected by the group. When the task force completes work on the four projects included in this report, it may consider working on these additional projects, which follow.

1. Develop a sheep producer leadership program.
2. Develop a database of producers willing to mentor or advise other producers.
3. Assemble and disseminate information on facilities, equipment and handling.
4. Develop an educational program outlining the advantages and disadvantages of networks.
5. Promote the creation of support networks.

## **Report Author**

This report was prepared by William F. Lazarus, Extension Economist, Department of Applied Economics, University of Minnesota.

## **Acknowledgements**

This program is sponsored by the Minnesota Lamb and Wool Producer Association, University of Minnesota, Central Livestock Association, Pipestone Veterinary Clinic, Prairie Lamb Cooperative, and Minnesota Department of Agriculture.

The survey is a cooperative effort involving volunteers from the sheep industry, businesses, local government, and educational institutions. The University of Minnesota and the Minnesota Department of Agriculture provided technical and research assistance for this program. Thanks are also extended to the Minnesota Department of Agriculture's Marketing and Development Division for data entry and preliminary analysis.

## **For More Information**

For more information on the Sheep Industry BR&E Strategies program, contact Dale Carter, BR&E Leadership Team, Extension Educator, and producer (ph 320-634-5735).